Employee Reactions to Enterprise Digital Transformation: A Stress Theory Perspective

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Abstract

Against the backdrop of a thriving digital economy, digital transformation has become a critical driver of high-quality enterprise development. However, many enterprises encounter internal challenges during digital transformation, including lack of employee support and passive cooperation. Currently, research on enterprise digital transformation predominantly focuses on macro-strategic levels, while studies examining its impact on internal employees remain insufficient. Therefore, this paper adopts a micro-level internal perspective, employing the dynamic process model of work stress to conceptualize digital transformation as a stressor. By focusing on the work stress induced by digital transformation, it seeks to reveal employees' differential reactions and underlying mechanisms. First, regarding stressor exploration, it employs grounded theory to summarize employees' perception and identification of stressors in digital transformation. Second, concerning stress outcome tracking, based on a change analysis framework, it investigates the impact of digital transformation on employee job performance and its dynamic temporal variations. Third, in analyzing stress experiences, from both cognitive and emotional perspectives, it examines the mechanisms, boundary conditions, and subsequent outcomes of employee support for or resistance to digital transformation. This paper not only enriches the scope and content of digital transformation studies within human resource management but also provides practical insights for enterprises to scientifically advance digital transformation and enhance employee support levels.

Full Text

How Do Employees Respond to Enterprise Digital Transformation? A Research Proposal from a Stress-Based Theoretical Perspective

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Abstract: In the era of digital economy, digital transformation has emerged as a critical driver of high-quality enterprise development. However, many organizations encounter internal challenges such as lack of employee support and passive cooperation during their digital transformation initiatives. Current research on enterprise digital transformation predominantly focuses on macro-strategic perspectives, leaving the impact on internal employees understudied. This paper adopts a micro-level organizational perspective and employs the Process Theories of Occupational Stress framework, conceptualizing digital transformation as a workplace stressor. By examining the work pressures that digital transformation imposes on employees, we aim to reveal the differential employee responses and underlying mechanisms. First, we investigate the stressor itself by using grounded theory to identify how employees perceive and recognize stressors during digital transformation. Second, we track stress outcomes by exploring the impact of digital transformation on employee work performance and its dynamic changes over time based on the Transition Processes framework. Third, we analyze stress experiences from both cognitive and emotional perspectives, examining the mechanisms, boundary conditions, and consequences of employee support for or resistance to digital transformation. This study not only expands the scope of digital transformation research in human resource management but also provides practical insights for organizations to systematically drive digital transformation and enhance employee support.

Keywords: Digital Transformation, Process Theories of Occupational Stress, Transactional Theory of Stress, Stressor-Emotion Model

1. Problem Statement

With continuous breakthroughs and widespread application of new-generation digital technologies such as cloud computing, big data, and artificial intelligence, the digital economy has flourished in China and become a crucial pillar of high-quality development (Qi Yudong et al., 2021). As the core unit of digital technology and digital economic development, enterprises are actively pursuing digital transformation. According to 2022 survey data, 81.6% of Chinese enterprises have initiated digital transformation, with the proportion reaching 92.3% among organizations with over 10,000 employees and 98.1% among listed companies. These statistics demonstrate that digital transformation has become one of the most important strategic initiatives for enterprises. However, alongside this rapid development, enterprises face new challenges. For instance, one A-share listed group encountered internal resistance when launching a digital

bidding system, as sales personnel refused to submit bids through the system due to unfamiliarity, time constraints, and rigid processes. A global survey by Boston Consulting Group also revealed strong employee concerns about digital transformation, with one-third explicitly rejecting new digital work methods and over half believing the transformation would not create actual career value. In contrast, only one-fifth felt they had opportunities to participate in digital transformation decision-making.

Behind these phenomena of passive cooperation lies the multiple pressures employees experience during digital transformation, including work overload, workplace surveillance, and digital skills learning pressure. According to a global digital skills index covering 19 countries, nearly 75% of employees feel they lack the digital skills currently required, while 76% feel unable to cope with digital challenges. Although digital technologies bring convenience, employees' insufficient understanding of digital transformation and the continuous evolution of digital technologies create new demands on workflows, communication patterns, and performance evaluation. When employees' digital skills fail to match actual requirements, they are likely to exhibit negative attitudes, leading to work withdrawal behaviors such as decreased work engagement and increased turnover. A McKinsey survey indicates that 70% of enterprise digital transformations fail due to employee resistance, highlighting the critical importance of employee participation and support. Therefore, recognizing digital transformation's impact on employees, understanding their intrinsic needs, identifying both positive and negative responses, and implementing supportive measures are key to successful digital transformation.

Unlike traditional organizational change, enterprise digital transformation imposes new job demands that typically exceed employees' existing resource levels, with new technologies and work methods potentially threatening their careers, thereby creating new work pressures (Cavanaugh et al., 2000; Lazarus & Folkman, 1984; Williams & Cooper, 2002). Employees' ability to understand and cope with these pressures is crucial, as it affects not only their adaptability and sustainable development in the digital age but also directly influences the implementation and effectiveness of enterprise digital transformation. To promote high-quality digital transformation, we urgently need to explore its impact on internal employees to better understand their stress responses and implement appropriate management measures to enhance understanding and support, ultimately driving enterprise high-quality development.

Although scholars have begun examining digital transformation's impact on employees, existing research remains limited. Some studies employ qualitative methods like case studies to explore digital transformation strategies, paths, and implications across different industries, including commercial banks (Xie Zhichun et al., 2018), catering enterprises (Gu Fangjie & Zhang Wenfeng, 2020), state-owned enterprises (Qi Yudong et al., 2021), and retail enterprises (Wang Yanyu et al., 2019). Other quantitative studies focus on how adopting specific digital technologies affects corporate strategy (Liu Yang et al., 2020), organiza-

tional structure (Chen Dongmei et al., 2020), process management (Chen Jian et al., 2020), business models (Wang Yanyu et al., 2019; Xing Xiaoqiang et al., 2019), and innovation performance (Hanelt et al., 2021). Overall, current digital transformation research concentrates on macro-management domains such as strategy, innovation, and operations management, while insufficiently addressing employee management issues during transformation. Few studies directly examine the work pressures generated by digital transformation and their impact on employees, or employees' cognitive responses and behavioral outcomes.

To address these new challenges in employee management during the digital era, this paper focuses on employees' dual responses—either "facilitating" or "hindering" digital transformation—from a work stress perspective. First, based on social cognition theory (Fiske & Taylor, 1991), we examine employees' individual perceptions of digital transformation as an organizational change, specifically how perceived digital transformation intensity affects cognitive, emotional, and behavioral consequences. Research shows that perceived organizational characteristics have more direct effects on employee cognition, attitudes, and behaviors than objective features (Frew & Bruning, 1987; Reis et al., 2016). Even within the same enterprise or department, employees may perceive different levels of digital transformation due to variations in positions, roles, and personal backgrounds (Meske & Junglas, 2021; Vom Brocke et al., 2018). Therefore, this study focuses on the differential impacts at the micro-individual level based on social cognition theory.

Second, this research adopts a stress perspective to understand and reveal digital transformation's impact on employees. We posit that as a profound organizational change, digital transformation creates numerous new work pressures. When facing uncertain change benefits and potential additional workloads, employees naturally develop resistance, creating change barriers (Choi, 2011; Fugate et al., 2012; Oreg, 2003; Venus et al., 2019). Therefore, starting from the premise that "digital transformation is a stressor for employees," we apply the Process Theories of Occupational Stress (Williams & Cooper, 2002) to explore the different types of work pressure triggered by digital transformation, employees' cognitive evaluations of these pressures, and their differential and dynamic impacts. Combining multiple research methods—including triangulated case and interview data, objective archival data, experimental data, and multi-source, multi-time-point survey data—this study investigates the dual reactions of employees to enterprise digital transformation and their underlying mechanisms.

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2. Research Status and Review

2.1 Conceptual Development of Enterprise Digital Transformation

Scholars have offered varying definitions of enterprise digital transformation. Some adopt a "process view," conceptualizing it as an ongoing process.

Loebbecke and Picot (2015) introduced the dynamic capabilities framework to analyze digital transformation strategy, examining how organizations build dynamic capabilities through threat sensing, opportunity seizing, and capability reconfiguration, proposing that true digital transformation is a continuous process of using digital technologies in daily organizational life. Correspondingly, some scholars define digital transformation as the interaction between business and technology enabled by AI, big data, and cloud computing, achieving value chain transformation across all stages including R&D, manufacturing, sales, service, and product usage (Wang Hecheng et al., 2021).

More scholars adopt a "change view," defining digital transformation around the changes it brings to organizational structure, production processes, personnel management, and corporate values. For example, Siebel (2019) defines digital transformation as the process of using digital technologies to transform production and operation systems, management models, and core business processes to create disruptive innovation and change. Abhari et al. (2021) further define it as fundamentally improving business models or processes using digital technologies to enhance performance. Gong and Ribiere (2021) emphasize the disruptive nature of change, noting that organizations must innovatively leverage digital technologies to activate key resources and capabilities, using strategic levers to fundamentally improve and redefine stakeholder value propositions. Huang Lihua et al. (2021) combine industry and academic definitions, describing digital transformation as the application of information, computing, communication, and connectivity technologies to trigger significant changes in organizational characteristics and reconstruct organizational structure, behavior, and operating systems.

Despite these different perspectives, all definitions emphasize "the application of digital technologies" and "the significant changes they bring." Vial (2019) integrates both views, providing a definition from four dimensions: target entity, scope, means, and expected outcomes, and constructing an eight-module digital transformation framework based on previous research. Vial defines enterprise digital transformation as the process of adopting combinations of information, computing, communication, and connectivity technologies to bring about major changes in enterprise attributes for overall improvement. This definition is widely used by scholars both domestically and internationally (Verhoef et al., 2021; Liu Yang et al., 2020; Shan Yu et al., 2021) and is adopted in this paper.

2.2 Research on Employee Responses to Enterprise Digital Transformation

As digital transformation practices advance, scholars have gradually begun to examine various employee responses (Kellogg et al., 2020; Murray et al., 2021; Raisch & Krakowski, 2021; Raveendhran & Fast, 2021; Tong et al., 2021; Wong et al., 2020; Xie Xiaoyun et al., 2021). However, relevant research remains limited and has not reached consistent conclusions. Literature reviews show that digital transformation has both positive and negative effects on employees,

triggering corresponding changes in cognition, emotion, and behavior.

First, employees experience cognitive changes during digital transformation. Digital transformation is not merely a technological change but a cognitive and thinking revolution (Shi Yanwei et al., 2023). Early research by Chalykoff and Kochan (1989) found that computer-based employee monitoring significantly reduced job satisfaction. Shanahan and Smith (2021) discovered, based on psychological contract theory, that employees perceive extensive digital monitoring as a breach of trust, generating feelings of anger and betrayal. Jeske and Santuzzi (2015) confirmed that organizational use of digital monitoring damages employee attitudes such as job satisfaction and affective commitment. Becker et al. (2021) further found through empirical research that close digital monitoring by organizations creates attention conflicts, leading to psychological anxiety, health impacts, and even negative effects on family life quality.

Meske and Junglas (2021) note that digital transformation affects employees' work autonomy and empowerment, influencing their cognition of digital technologies and work content. Winasis et al. (2021) argue that while digital transformation expands employees' information sources, it also reduces their engagement. Tang et al. (2023) found, based on self-cognition theory, that employees relying on intelligent machines in digital enterprises are more task-focused and have higher perception of work goal progress. Shi Yanwei et al. (2023) propose, based on the person-task-technology fit framework, that digital work cognitive reshaping changes employees' views on the relationship between digital technology, their own preferences, and digital work tasks.

Second, employees experience emotional changes during digital transformation. Current research primarily focuses on negative emotional responses, with only a few studies confirming positive emotional reactions. For example, Karimi and Walter (2015) found that high psychological distance from digital transformation leads to employee rejection. Dengler and Gundert (2021) argue that digital transformation increases employees' job insecurity, forcing them to exert more effort to keep their jobs, while negative pressure from digital transformation offsets these efforts. Yassaee and Mettler (2019) suggest that while digital tools enhance management effectiveness, they also increase employees' mental stress. Zhou Wenbin and Wang Cai (2021) found a significant positive correlation between industrial robot adoption and employee job insecurity. Selenko et al. (2022) argue that changes from new information technologies may lead to potential job loss, reducing both work quality and psychological well-being. Zhang Xixi and Hao Xinglin (2023) note that employees may feel deprived of control during digital transformation, generating resistance. However, Abhari et al. (2021) found that employees can improve social experiences at work by communicating with colleagues during digital transformation.

Third, employees experience behavioral changes during digital transformation. Some scholars argue that behavioral responses mainly stem from the assistive functions of new digital technologies like AI and algorithms (Rimon, 2017; Wang et al., 2020; Winasis et al., 2021). For instance, Rimon (2017) notes that digital

platform-based communication improves dialogue efficiency among employees, meets real-time needs, and enhances work efficiency. However, employees must also learn deeply to adapt to these new technologies. Vom Brocke et al. (2018) argue that digitalization promotes employees' exploratory behavior and stimulates innovation capabilities. Kensbock and Stöckmann (2021), based on self-determination theory, propose that the disruptive changes brought by digital transformation motivate employees to improve their technical capabilities and adapt, with enhanced learning orientation making them more willing to make suggestions and promoting participation. However, many scholars argue that while digital transformation drives skill enhancement, employees simultaneously face challenges adapting to new technologies and organizational culture changes, creating more work pressure that may ultimately lead to change resistance behaviors. For example, Wang and Han (2020) found that employees with strong defensive psychology may strongly reject or resist digital transformation due to concerns about personal interests, tending to withhold information or knowledge and reducing communication with team members, thereby negatively impacting organizational cohesion.

2.3 Review of Existing Research

Based on the literature review, enterprise digital transformation has gained considerable scholarly attention in recent years. However, compared to macro-management fields like strategic management and technology economics, micro-level research on how employees cope with digital transformation as a "stressor" and their cognitive, emotional, and behavioral responses remains in its infancy. Through our review of digital transformation definitions and their impact on employees, we identify three areas for deeper exploration.

First, micro-level research on digital transformation's impact on internal employees and their responses is relatively limited. Existing studies primarily focus on behavioral changes during digital transformation, with less attention to cognitive and emotional aspects. Moreover, current research mainly adopts a "human-technology interaction" perspective, focusing on the impact of specific digital technology adoption, with few studies examining employee responses from a stress perspective. In reality, digital technology application is only one dimension of digital transformation, which also includes product innovation, organizational structure, collaboration methods, and organizational culture (Meske & Junglas, 2021; Raghuram et al., 2019; Schneider & Sting, 2020; Vom Brocke et al., 2018; Shi Yanwei et al., 2023; Wang Hecheng et al., 2021). Employees must simultaneously address challenges in technology adaptation and cultural change, creating different types of work pressure. Future research should expand theoretical perspectives to comprehensively examine the multidimensional changes in emotion, cognition, and behavior that employees experience during digital transformation.

Second, the internal mechanisms and boundary conditions of digital transformation's impact on employees require further investigation. Literature reviews

reveal inconsistent conclusions across studies. Digital transformation's effects on employee cognition (e.g., empowerment, work autonomy), emotion (e.g., psychological distance, sense of control), and behavior (e.g., innovation, proactive behavior) can be either positive or negative, making it difficult to predict why employees develop different cognitive, emotional, or behavioral responses. We argue these inconsistencies stem from inadequate examination of mediating mechanisms and boundary conditions between digital transformation and employee responses, with insufficient consideration of factors like job characteristics, psychological motivation, skill levels, and organizational climate. Additionally, scholars note that current organizational management research focuses more on technology's unidirectional impact on employees (Stone et al., 2015; Wang et al., 2020; Xie Xiaoyun et al., 2021), without fully considering employees' direct responses and reverse effects on digital technology. Future research should further explore bidirectional influence paths and boundary conditions.

Third, most existing research uses case analysis and other qualitative methods, with limited empirical evidence. As an emerging management practice, early digital transformation research primarily employed case study methods to timely summarize information and provide detailed feedback for managers (Wang Ziyang et al., 2020; Qian Yu et al., 2021). However, as digital transformation rapidly develops, research samples have expanded, large-scale data and statistical results continue to improve, and the foundation for empirical research has become increasingly robust. Consequently, more scholars are calling for empirical research on digital transformation to obtain more generalizable evidence to guide management practice (Wu Xiaobo et al., 2022; Xiao Tusheng et al., 2022).

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3. Research Framework

Based on the Process Theories of Occupational Stress, this study aims to deeply explore employees' dual reactions to enterprise digital transformation and their underlying mechanisms (Figure 1 [Figure 1: see original paper]). The Four-way model of occupational stress comprises four components: stressors, individual characteristics, coping strategies, and stress outcomes. This model emphasizes that even under identical stressor conditions, different individual characteristics and coping strategies lead to positive or negative stress experiences and consequently different outcomes (Williams & Cooper, 2002). Accordingly, this study conducts four sub-studies around the Four-way model. Specifically, Study 1 focuses on stressors during digital transformation, qualitatively exploring and summarizing employee perceptions and identification of digital transformation stressors. Study 2 tracks stress outcomes, using the Transition Processes framework and discontinuous growth modeling to examine whether digital transformation affects employee work performance and how this impact changes over time. Studies 3 and 4 adopt cognitive and emotional perspectives on stress, respectively, examining how employees form dual stress experiences under different

digital technology characteristics and individual attitudes, and how these affect stress outcomes. Study 3 uses the Transactional Theory of Stress (Lazarus & Folkman, 1984; LePine et al., 2016) to explore cognitive mechanisms, boundary conditions, and outcomes of dual reactions. Study 4 uses the Stressor-Emotion Model (Spector & Fox, 2005) to examine emotional mechanisms, boundary conditions, and outcomes.

3.1 Study 1: Identification and Perception of Stressors in Digital Transformation

Study 1 aims to explore the "stressor" in employees' digital transformation process. By scientifically identifying and summarizing employee perceptions of stressors, it provides rich empirical and theoretical support for subsequent research. Although previous research confirms digital transformation's positive impacts on resource optimization, collaboration efficiency, decision-making accuracy, and customer value creation, its direct effects on employee emotions, cognition, and behavior remain unclear. Current discussions about new work requirements and changes employees face during digital transformation remain at the level of "observation" and "discussion," lacking systematic exploration, summarization, and classification of various stressors. Therefore, this study first conceptualizes digital transformation and its impacts as a "stressor," summarizing how employees identify and perceive these stressors.

Stress is the process that occurs when environmental demands exceed an individual's existing resource levels (Cavanaugh et al., 2000; Lazarus & Folkman, 1984; Williams & Cooper, 2002). Stressors are situational factors that employees frequently encounter and significantly affect them (Bliese et al., 2017). Different stress research streams have identified and categorized stressor content and types. For example, the Transactional Theory of Stress suggests that job demands perceived as beneficial for personal growth and reward attainment can be considered challenge stressors, such as workload, time pressure, job complexity, and responsibility (LePine et al., 2005; Webster et al., 2011; Zhang et al., 2014; Zhang et al., 2018). Conversely, job demands perceived as not beneficial for growth or potentially harmful are considered hindrance stressors, such as power struggles, interpersonal conflicts, role ambiguity, role conflict, and resource inadequacy (LePine et al., 2005; Webster et al., 2011; Zhang et al., 2014; Zhang et al., 2018).

Although existing research has not systematically categorized the work pressures brought by digital transformation, preliminary observations and case studies suggest that digital transformation and its associated changes are perceived by employees as significant work stressors that may simultaneously have positive and negative effects. For example, in a modern residential real estate company, employees generally acknowledged the benefits of "digital intelligence empowerment" while also feeling pressure from time constraints and high job complexity. Similarly, our case study in the service industry found that while digital systems significantly improved service efficiency, employees also experienced "helpless-

ness."

Based on these observations, Study 1 will employ a combined theoretical deduction and grounded theory approach to identify and summarize employee "stressors" from management practice. Specifically, Study 1 will use literature review alongside corporate archival data, in-depth interviews, and observational materials, applying grounded theory coding to gradually reveal internal connections between phenomena and compare differences across industries and employee types. Study 1 addresses the following research questions:

Research Question 1: Which changes or new requirements brought by enterprise digital transformation are identified by employees as stressors?

Research Question 2: How do employees from different industries or job types differ in their perception and identification of these stressors?

3.2 Study 2: Temporal Dynamics of Employee Performance During Digital Transformation

Study 2 aims to explore "stress outcomes" during digital transformation—specifically, whether digital transformation affects employees' objective work performance and how this impact changes over time, providing preliminary evidence for examining dual reactions.

Current academic research on digital transformation's impact on objective performance primarily focuses on the organizational level. Studies confirm that digital transformation or algorithm adoption positively affects resource allocation, collaboration efficiency, decision-making accuracy, organizational learning, and customer value creation (Bonanomi et al., 2020; Yu et al., 2018; Wang et al., 2020). However, few studies directly examine the impact on individual employee performance, with most research remaining at the theoretical discussion stage (Boudreau, 2016; Liang Jian et al., 2021).

Study 2 applies the Transition Processes framework to examine digital transformation's impact on employee work performance and its temporal patterns. The Transition Processes framework (Bliese & Lang, 2016; Bliese et al., 2017) is typically used to study event impacts where a clear start time allows division into pre-event and post-event periods. In this study, we conceptualize digital transformation as an "event," defining its start time as the official launch date of a digital transformation project—when systems, platforms, or related measures and technologies are formally implemented. The framework suggests that event outcomes are influenced by the duration since the event occurred. Based on preliminary research, we propose that employees' objective work performance may show different temporal patterns after digital transformation implementation. Since the direct impact remains unclear, we tentatively propose several possible patterns:

Possible Pattern 1: Compared to pre-transformation, employee performance may improve over time after digital transformation launch (Figure 2 [Figure 2:

see original paper], Pattern). The rationale: Over time, employees adapt to new work methods and digital scenarios, become familiar with new technologies and tools, and develop more creative and efficient approaches on the basis of "practice makes perfect." The "facilitating" effect becomes increasingly apparent, leading to improved performance.

Possible Pattern 2: Compared to pre-transformation, employee performance may decline over time after digital transformation launch (Figure 2, Pattern). The rationale: Employees cannot adapt to new work models, requiring more time and energy to learn new technologies, squeezing time for core job responsibilities and creating additional psychological pressure. Employees feel helpless under new digital systems and algorithms, and the "hindering" effect becomes increasingly apparent, leading to declining performance.

Possible Pattern 3: Compared to pre-transformation, employee performance may first improve then decline over time after digital transformation launch (Figure 2, Pattern). The rationale: Employees may initially experience digital empowerment effects and performance improvements, but higher demands from digital transformation or inability to adjust work methods and mindsets in new scenarios may lead to misalignment with digital work requirements, causing performance to decline over time.

Possible Pattern 4: Compared to pre-transformation, employee performance may first decline then improve over time after digital transformation launch (Figure 2, Pattern). The rationale: Employees may initially struggle to accept new work requirements, adapt to new models and processes, and master new tools, causing performance to decline. However, as digitalization progresses, platform algorithms and underlying logic iteratively upgrade through actual operation, gradually adapting to organizational and employee needs. Successful 磨合 (磨合) and adaptation across internal and external links make digital empowerment more effective, leading to performance improvements over time.

Study 2 addresses the following research questions:

Research Question 3: Does the official launch of digital transformation projects affect employees' objective work performance?

Research Question 4: Compared to pre-transformation, how does employees' objective work performance change over time after digital transformation launch?

3.3 Study 3: Cognitive Mechanisms and Boundary Conditions of Dual Reactions

Study 3 examines "stress experience" from a cognitive perspective. Based on the Transactional Theory of Stress (Lazarus & Folkman, 1984; LePine et al., 2016), this study reveals the cognitive mechanisms through which employees form "facilitating" or "hindering" responses to digital transformation intensity, and explores how digital technology characteristics and employee at-

titudes influence stress appraisal types and subsequent outcomes. Using experimental data and multi-time-point paired survey data, we empirically test how perceived digital transformation intensity influences response behaviors (support/resistance; work performance/withdrawal) through employee stress appraisal types (challenge/hindrance). Additionally, based on the Technology Acceptance Model (Davis et al., 1989; Venkatesh & Davis, 1996; Venkatesh & Davis, 2000; Venkatesh & Bala, 2008), we examine the moderating roles of digital technology characteristics (perceived usefulness, perceived ease of use) and employee attitudes (general attitudes toward digital technology: positive/negative). Figure 3 [Figure 3: see original paper] presents the theoretical model.

3.3.1 Stress Experience: Dual Cognitive Appraisal of Digital Transformation According to the Transactional Theory of Stress, individuals appraise stressors based on their experiences and cognition (stressor appraisal; LePine et al., 2016), which influences subsequent coping strategies and work performance. When external demands exceed existing resources, stressors emerge (Lazarus & Folkman, 1984). Study 3 operationalizes stressors at the perception level—employees' perceived digital transformation intensity. Based on social cognition theory (Fiske & Taylor, 1991), even within the same enterprise or team, different employees perceive different levels of digital transformation, creating inter-individual differences in stressor perception. Employees conduct two-stage appraisals: "primary appraisal" involves categorizing the stress type, where external demands may be perceived as opportunities for growth and development (challenge appraisal) or as events that restrict or harm (hindrance appraisal). "Secondary appraisal" involves responding to the primary appraisal outcome, where individuals determine which behaviors to adopt based on various coping mechanisms.

Webster et al. (2011) and LePine et al. (2016) note that during primary appraisal, employees facing the same stressor may conduct different types of cognitive appraisals based on the stressor's meaning and impact. Therefore, Study 3 proposes that digital transformation intensity triggers both challenge and hindrance appraisals.

From the "facilitating" perspective, employees may conduct challenge appraisals of digital transformation intensity, leading to supportive responses. Previous research shows that job demands like workload, time pressure, complexity, and responsibility lead to challenge appraisals and positive performance (LePine et al., 2005; Wallace et al., 2009; Webster et al., 2011; Zhang et al., 2014). Challenge appraisals of digital transformation may arise because: (1) Digital transformation increases work freedom and autonomy. Digital, online, and intelligent remote work systems free employees from on-site constraints, providing control and allowing discretionary time and energy for specific behaviors, creating development opportunities. (2) Leadership models and information interaction patterns provide rich information resources, enabling employees to generate bet-

ter work ideas through learning (Li Yanping & Miao Li, 2020; Liang Jian et al., 2021; Shi Yanwei et al., 2023; Yao Xiaotao et al., 2022). (3) Digital technologies significantly improve efficiency and help employees build closer connections with colleagues and clients across time and geography (Wang et al., 2020), enhancing perceived social support. Thus, we propose:

Hypothesis 1: Perceived digital transformation intensity positively affects employees' challenge appraisal.

From the "hindering" perspective, employees may conduct hindrance appraisals of digital transformation intensity. Previous research indicates that role ambiguity, management pressure, role conflict, and resource inadequacy lead to hindrance appraisals (LePine et al., 2005; Webster et al., 2011; Zhang et al., 2014). Hindrance appraisals may arise because: (1) Digital transformation raises job demands. Digital systems and new work content increase complexity and require stronger data analysis capabilities and digital system proficiency, creating new and challenging role requirements (Tu Yan et al., 2023; Xie Xiaoyun et al., 2021; Zhang Xixi & Hao Xinglin, 2023). (2) Digital transformation causes role ambiguity. Research shows that "remote work" and "virtual teams" in digital environments cause individuals to lose reference points and group belonging, experiencing role ambiguity and identity confusion (Petriglieri et al., 2019). Additionally, online communication reduces emotional interaction and perceived social support (Siampou et al., 2014; Schneider & Sting, 2020). (3) Digital work systems feature comprehensive coverage, immediate feedback, high interaction frequency, and opacity. Constant work connectivity increases organizational control and reduces work autonomy (Xie et al., 2019), causing resistance to digital organizational control (Kellogg et al., 2020). Thus, we propose:

Hypothesis 2: Perceived digital transformation intensity positively affects employees' hindrance appraisal.

3.3.2 Stress Outcomes: Dual Reactions and Behavioral Consequences

Based on the Transactional Theory of Stress, stress appraisal outcomes influence coping strategies (appraisal response) and ultimately affect work performance (Lazarus & Folkman, 1984; LePine et al., 2016). We propose that different stress appraisals lead to supportive/resistant responses to digital transformation, subsequently affecting work performance.

From the "facilitating" perspective, digital transformation intensity promotes challenge appraisal, encouraging supportive responses and improving work performance. When employees view additional demands as opportunities for growth and reward, they invest more time and energy in learning new technologies, demonstrating supportive behaviors like active participation and knowledge contribution. This process enhances capabilities and efficiency, improving task and innovative performance (Rimon, 2017; Wang et al., 2020). Additionally, higher work autonomy and digital organizational climate remind employees of digital transformation's importance and value, further promoting

supportive responses and work method innovation (Vom Brocke et al., 2018). Therefore, we propose:

Hypothesis 3: Perceived digital transformation intensity positively affects challenge appraisal, promoting supportive responses to digital transformation and ultimately improving work performance.

From the "hindering" perspective, digital transformation intensity triggers hindrance appraisal, leading to resistance and work withdrawal behaviors. New technologies create demands including high complexity and strict time pressure (Cavanaugh et al., 2000), potentially harming employee psychology and behavior (O'Driscoll & Dewe, 2001). When employees perceive potential loss risks, they adopt avoidance and refusal to reduce negative feelings (Lazarus & Folkman, 1984; LePine et al., 2016), demonstrating resistance such as passive work, absenteeism, and turnover. Additionally, higher organizational control and information load may cause anxiety and psychological pressure (Wang et al., 2023), leading employees to express resistance to alleviate negative feelings and engage in withdrawal behaviors. Thus, we propose:

Hypothesis 4: Perceived digital transformation intensity positively affects hindrance appraisal, leading to resistance to digital transformation and ultimately causing work withdrawal behaviors.

3.3.3 Technology Characteristics: Moderating Effects of Usefulness and Ease of Use The Technology Acceptance Model (Davis et al., 1989; Venkatesh & Davis, 1996; Venkatesh & Davis, 2000; Venkatesh & Bala, 2008) explains factors influencing users' adoption decisions. The model has evolved from the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and has been widely validated across technologies and contexts (Grover et al., 2019; Majumder et al., 2022). Perceived usefulness and perceived ease of use are core variables repeatedly proven to influence technology acceptance (Granić & Marangunić, 2019).

Perceived usefulness refers to users' subjective assessment of whether a specific technology improves work performance (Davis, 1989). When employees perceive higher digital technology usefulness, they are more likely to conduct challenge appraisals and less likely to conduct hindrance appraisals, promoting supportive responses and positive outcomes. This is because: (1) When facing complex challenges, recognizing that digital technology can help complete tasks and improve performance makes employees more willing to view learning requirements as growth opportunities, transforming pressure into motivation for challenge appraisal. (2) When perceiving high usefulness, employees are more inclined to share difficulties with colleagues to gain knowledge and experience, obtaining social-emotional support and practical experience that buffers potential negative effects (Stöckl & Struck, 2022), reducing self-doubt and hindrance appraisal tendencies. Thus, we propose:

Hypothesis 5a: Perceived digital technology usefulness strengthens the pos-

itive relationship between digital transformation intensity and challenge appraisal.

Hypothesis 5b: Perceived digital technology usefulness weakens the positive relationship between digital transformation intensity and hindrance appraisal.

Perceived ease of use refers to the degree to which users believe using new technology requires minimal physical or mental effort (Davis, 1989). When employees perceive higher digital technology ease of use—believing they can easily acquire new knowledge and skills to address new scenarios—they are more likely to positively evaluate new demands and challenges, increasing challenge appraisal likelihood and reducing hindrance appraisal likelihood. Specifically: (1) User-friendly and easy-to-operate digital technologies help employees improve efficiency and complete more tasks in the same time (Hansen et al., 2018; Tahar et al., 2020), making them view new technologies as tools for capability improvement and career development, leading to challenge appraisal. (2) According to the effort-recovery model, coping with job demands causes short-term physiological and psychological load reactions (Meijman & Mulder, 2013). High ease of use reduces learning and adaptation difficulty, making employees believe mastering digital technology does not require unbearable effort and cost. Lighter coping pressure and less extra effort reduce psychological burden, preventing employees from viewing adaptation as a hindrance to growth, thereby reducing hindrance appraisal tendencies. Thus, we propose:

Hypothesis 6a: Perceived digital technology ease of use strengthens the positive relationship between digital transformation intensity and challenge appraisal.

Hypothesis 6b: Perceived digital technology ease of use weakens the positive relationship between digital transformation intensity and hindrance appraisal.

3.3.4 Individual Attitudes: Moderating Effects of Digital Technology Attitudes The Technology Acceptance Model emphasizes the important influence of subjective norms, such as technology attitudes, on adoption decisions. Combining this with the digital transformation context, we examine the moderating role of employee digital technology attitudes.

Employee digital technology attitude refers to employees' overall attitude toward using major digital technologies like AI, algorithms, and machine learning, divided into positive and negative categories (Schepman & Rodway, 2020). As digitalization progresses, individual attitudes toward digital technology play an increasingly important role. Employees with positive attitudes are interested in using digital technology in daily life, believe it has many beneficial applications, and will positively impact work and life in the long term. Conversely, those with negative attitudes tend to believe digital technology carries threats and risks, cannot be fully trusted, and will negatively impact work and life.

When employees hold positive digital technology attitudes, they are more likely

to believe digital transformation promotes self-growth and development, conducting challenge appraisals. First, positively-attituded employees are curious and eager to learn about digital technology, viewing technical difficulties as challenges rather than threats and 倾向于 (tending to) exert effort to solve problems rather than avoid them. Second, they view digital transformation as consistent with social development and technological progress trends, believing it will ultimately succeed and create development opportunities for individuals and enterprises despite challenges. Third, they form a positive human-technology interaction perspective, maintaining higher confidence and self-efficacy when facing digital transformation challenges, believing they can adapt faster to new workflows and technical requirements, surpass colleagues, receive praise and rewards from superiors, and gain more promotion opportunities. Therefore, when perceiving digital transformation intensity, employees with positive attitudes are more likely to conduct challenge appraisals.

Conversely, when employees hold negative digital technology attitudes, they are more likely to doubt digital transformation's necessity or worry about negative impacts from new technologies, conducting hindrance appraisals. First, negative attitudes make it difficult for employees to understand digital transformation's purpose, reducing motivation to learn and adapt to new technologies and viewing change as a heavy burden. Second, negatively-attituded employees may doubt their work capabilities, believing they need to exert extra effort to adapt to new requirements, reducing satisfaction and self-efficacy and generating more resistance and negative behaviors. Third, when facing high-frequency communication and constant work connectivity from digital transformation, negatively-attituded employees are more likely to feel irritable and constrained, enhancing negative evaluations of digital transformation. Thus, we propose:

Hypothesis 7a: The interaction between digital transformation intensity and positive digital technology attitude positively affects challenge appraisal. The stronger the positive attitude, the stronger this positive effect.

Hypothesis 7b: The interaction between digital transformation intensity and negative digital technology attitude positively affects hindrance appraisal. The stronger the negative attitude, the stronger this positive effect.

3.4 Study 4: Emotional Mechanisms and Boundary Conditions of Dual Reactions

Study 4 examines "stress experience" from an emotional perspective. Based on the Stressor-Emotion Model (Spector & Fox, 2005), this study reveals the internal emotional mechanisms through which employees form "facilitating" and "hindering" responses to digital transformation intensity, and how digital technology characteristics and employee attitudes influence emotional types and subsequent outcomes. Using scenario-based experiments and Experience Sampling Methodology (ESM) survey data at the workday level, we test how digital transformation intensity influences response behaviors (support/resistance; work per-

formance/withdrawal) through positive/negative emotional types (stress experience: attentiveness, anxiety). Additionally, digital technology characteristics (perceived usefulness, perceived ease of use; Davis et al., 1989) and employee attitudes (positive/negative digital technology attitudes; Schepman & Rodway, 2020) moderate these relationships. Figure 4 [Figure 4: see original paper] presents the theoretical model.

3.4.1 Stress Experience: Dual Emotional Reactions to Digital Transformation Study 4 explores employees' emotional reactions to digital transformation as a stressor based on the Stressor-Emotion framework. Research shows that employee emotions change over time and are continuously influenced by stressors (Rodell & Judge, 2009; Rosen et al., 2020; Zhang et al., 2018). The Stressor-Emotion framework links stressors, emotions, and behaviors, proposing that stressor perception influences emotional states that ultimately affect behavior (Spector & Fox, 2005).

Existing research confirms that perceptions of different stressor types trigger corresponding emotional reactions (Rodell & Judge, 2009; Rosen et al., 2020). Different stressor types contain different information and characteristics, allowing employees to judge potential outcomes and value, generating corresponding emotions (Cavanaugh et al., 2000). For example, hindrance stressors typically trigger negative emotions, while challenge stressors may trigger either positive or negative emotions (Rodell & Judge, 2009). Additionally, fluctuations in stressor levels trigger different emotions—volatile challenge stressor levels may generate negative emotions, while stable levels may generate positive emotions (Rosen et al., 2020; Zhang et al., 2018; Zhang Zhixin & Liang Fu, 2021). In the digital transformation context, employees perceive significant changes in task execution processes, social relationships, and overall work experiences (Meske & Junglas, 2021; Schneider & Sting, 2020; Vom Brocke et al., 2018; Shi Yanwei et al., 2023; Tu Yan et al., 2023). These changes may be viewed as growth opportunities or development obstacles. Therefore, we propose that digital transformation intensity generates dual emotional reactions: employees may experience positive emotions like attentiveness (Watson, 2000) to address challenges and opportunities, or negative emotions like anxiety to face uncertainty and potential negative impacts.

From the "facilitating" perspective, digital transformation intensity may trigger attentiveness—a positive emotion characterized by alertness, high concentration, and determination, typically indicating readiness to seize opportunities or achieve goals (Gollwitzer, 1990). Research shows that attentiveness promotes better work states, including increased pleasure and engagement (Watson, 2000), improved performance (Rosen et al., 2020), and organizational citizenship behavior (Rodell & Judge, 2009; Rosen et al., 2020). Digital transformation's technology empowerment, higher work freedom (Boudreau, 2016), rich work methods, and abundant information (Liang Jian et al., 2021) make employees perceive more development opportunities. When facing digital transformation,

they feel motivated to overcome obstacles, actively respond to change, and develop determination to complete tasks at higher levels, focusing attention on important tasks. Thus, we propose:

Hypothesis 8: Perceived digital transformation intensity positively affects employee attentiveness.

From the "hindering" perspective, digital transformation intensity may trigger anxiety—a negative emotion reflecting uncertainty and potential threats (Lazarus, 1991). Anxiety reflects self-doubt and lack of confidence, emerging when individuals perceive inconsistencies between developments and their goals or detect potential risks (Cheng & McCarthy, 2018). In digital transformation, information overload from massive data (Yu et al., 2018), algorithmic control-induced fairness imbalances (Newman et al., 2020), role ambiguity from remote work and virtual teams (Petriglieri et al., 2019), and comprehensive digital surveillance (Curchod et al., 2020; Glikson & Woolley, 2020; Kellogg et al., 2020) may reduce work control and generate anxiety. Additionally, new learning requirements and time pressure during digital empowerment make employees doubt whether they have adequate resources (e.g., time, attention) to complete tasks, triggering anxiety. Thus, we propose:

Hypothesis 9: Perceived digital transformation intensity positively affects employee anxiety.

3.4.2 Stress Outcomes: Dual Reactions and Behavioral Consequences
According to the Stressor-Emotion framework (Spector & Fox, 2005), individuals make behavioral responses after experiencing different emotional states. In this framework, employees' different emotional reactions lead to supportive/resistant responses to digital transformation, subsequently affecting work performance.

From the "facilitating" perspective, digital transformation intensity enhances employee support for digital transformation through attentiveness, thereby improving work performance. Research shows that attentiveness predicts subsequent task performance (Rosen et al., 2020) and organizational citizenship behavior (Rodell & Judge, 2009). When attentive, employees concentrate highly and complete digital transformation tasks with higher quality, achieving better performance. Attentiveness also helps employees feel satisfaction and belonging (Hodges & Clifton, 2004; Peterson & Seligman, 2004), enabling them to better understand digital technology's positive impacts and apply it to improve performance. Additionally, attentive employees show higher alertness, better managing their behavior to adapt to digital transformation requirements, ensuring compliance with organizational change norms and reducing counterproductive impulses (Rosen et al., 2020). Thus, we propose:

Hypothesis 10: Perceived digital transformation intensity positively affects attentiveness, promoting support for digital transformation and ultimately improving work performance.

From the "hindering" perspective, digital transformation intensity may trigger anxiety, leading to resistance and work withdrawal behaviors. Research shows that when employees view digital transformation as an obstacle to personal growth and task completion, they experience anxiety (Boswell et al., 2004). This anxiety may reduce investment in new digital work to decrease contact with transformation-related stressors. They may also object to the transformation or engage in resistant or destructive behaviors like turnover or frequent absenteeism (Bovey & Hede, 2001; Oreg, 2003; Venus et al., 2019). Thus, we propose:

Hypothesis 11: Perceived digital transformation intensity positively affects anxiety, leading to resistance to digital transformation and ultimately causing work withdrawal behaviors.

3.4.3 Technology Characteristics: Moderating Effects of Usefulness and Ease of Use We propose that different digital tools, platforms, and systems' characteristics further influence employees' emotional, behavioral, and outcome reactions during digital transformation. When employees perceive higher digital technology usefulness—believing digital technology positively impacts work performance—they are more likely to experience attentiveness and less likely to experience anxiety. First, high perceived usefulness may stem from digital tools like remote work and real-time collaboration systems that enable efficient communication and collaboration, avoiding time and space constraints and providing greater autonomy and flexibility. Such work environments help balance work and life, reducing emotional burden (Lister & Harnish, 2019; Fleischer & Wanckel, 2023), providing emotional resources for focused work. Second, when perceiving high usefulness, employees experience more digital empowerment during transformation, expecting to improve performance through new technologies and gaining smoother work experiences and higher achievement. They are more motivated to enhance capabilities and focus on important, meaningful work, effectively alleviating anxiety from changed work content or higher requirements. Thus, we propose:

Hypothesis 12a: Perceived digital technology usefulness strengthens the positive relationship between digital transformation intensity and attentiveness.

Hypothesis 12b: Perceived digital technology usefulness weakens the positive relationship between digital transformation intensity and anxiety.

When employees perceive digital technology as easy to use, attentiveness may increase and anxiety may decrease. First, easy-to-use digital tools change the learning curve shape, reducing necessary learning time for new technologies, helping employees focus more energy on completing tasks or even engaging in more creative activities rather than struggling with complex learning and adaptation processes (Abdullah et al., 2016; Yang et al., 2022). Second, easy-to-use digital tools often have intuitive user interfaces that require no strenuous understanding, allowing employees to focus on tasks rather than consuming energy on preparatory work. Such easily mastered technology not only increases

confidence but also reduces uncertainty and anxiety from usage difficulties and adaptation barriers. Thus, we propose:

Hypothesis 13a: Perceived digital technology ease of use strengthens the positive relationship between digital transformation intensity and attentiveness.

Hypothesis 13b: Perceived digital technology ease of use weakens the positive relationship between digital transformation intensity and anxiety.

3.4.4 Individual Attitudes: Moderating Effects of Digital Technology Attitudes We propose that employee digital technology attitudes also influence emotional reactions to digital transformation. When employees hold positive attitudes, they are more open and receptive to new digital technologies and work scenarios, focusing more on advantages and capabilities, gaining more positive feelings during transformation. They also have clearer understanding of digital transformation goals and benefits, understanding how digital tools improve workflows, thus focusing more on achieving these goals. When employees hold negative attitudes, they pre-emptively believe digital technology carries risks, feeling insecure and questioning technology's capabilities and work quality. Second, negatively-attituded employees easily conflict with organizational digital transformation orientation, causing disconnection from teams and even loneliness. Research shows work-related loneliness means important needs are unmet, triggering anxiety and negative impacts (Wright & Silard, 2021). Additionally, employees worry about competence when facing new learning and complexity requirements, generating more negative feelings. Thus, we propose:

Hypothesis 14a: The interaction between digital transformation intensity and positive digital technology attitude positively affects attentiveness. The stronger the positive attitude, the stronger this positive effect.

Hypothesis 14b: The interaction between digital transformation intensity and negative digital technology attitude positively affects anxiety. The stronger the negative attitude, the stronger this positive effect.

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4. Theoretical Contributions

Digital transformation is a priority for enterprises seeking medium-to-long-term development. However, not all employees directly experience digital convenience. Instead, some perceive increased workload and work pressure. For example, digital transformation raises requirements for efficient information processing, rapid decision-making, and continuous learning, increasing both job difficulty and psychological burden. Digital technology-driven work methods require employees to learn collaboration within broader digital ecosystems, while rapid organizational adjustments and team restructurings may cause role ambiguity or conflict. The long-term nature and uncertainty of digital transformation also trigger persistent anxiety, exacerbating work pressure. Surveys show that

employees' difficulty changing old mindsets, inconsistent digital understanding, and digital talent gaps also challenge digital transformation. Therefore, employees can be either positive "facilitating" factors or negative "hindering" forces. Based on theoretical and practical needs, this paper conceptualizes digital transformation as a workplace "stressor" and constructs a theoretical framework of employees' dual reactions from the Process Theories of Occupational Stress perspective, exploring differential impacts and internal mechanisms of enterprise digital transformation strategy on micro-level individuals.

This study makes three theoretical contributions:

First, it constructs a theoretical framework of dual "facilitating" and "hindering" reactions to digital transformation, expanding digital transformation research in micro-management domains. Previous research often adopted a human-technology interaction perspective, discussing the impact of specific digital technology use on individuals or HR management (Bhave et al., 2020; Charlwood & Guenole, 2022; Glikson & Woolley, 2020; Kellogg et al., 2020; Murray et al., 2021; Raisch & Krakowski, 2021; Raveendhran & Fast, 2021; Tong et al., 2021; Vrontis et al., 2022; Wang et al., 2020; Shi Yanwei et al., 2023; Tu Yan et al., 2023; Xie Xiaoyun et al., 2021). This paper conceptualizes digital transformation overall and its intensity perception as a "stressor," integrating enterprise digital strategy and employee stress into one theoretical framework to provide theoretical and empirical evidence for dual reactions. Examining overall digital transformation impact is necessary because: (1) Digital transformation includes not only technology adoption but also changes in internal relationships and overall work experiences (Bonet & Salvador, 2017; Meske & Junglas, 2021; Vom Brocke et al., 2018; Raghuram et al., 2019; Liang Jian et al., 2021; Yao Xiaotao et al., 2022). (2) Based on social cognition theory (Fiske & Taylor, 1991), even within the same enterprise or team, different employees perceive different digital transformation intensities and have different stressor perceptions that change with internal and external factors. While management scholars have increasingly focused on digital transformation, research on its direct individual impact remains largely observational and theoretical, with limited direct empirical evidence. This study first conceptualizes digital transformation as a "stressor," summarizing how employees identify and perceive these stressors. It then treats digital transformation as a change "event," longitudinally testing whether and how individual objective performance is affected over time. By linking enterprise-level strategic choice with individual-level behavioral reactions and work outcomes (performance and withdrawal), this study provides direct evidence for digital transformation's individual-level effects and a foundation for future micro-level research.

Second, based on the Process Theories of Occupational Stress, this study explores stress experiences and outcomes during digital transformation, providing a new perspective for revealing dual reaction formation mechanisms. As the digital economy develops, scholars have explored digital transformation mainly around macro-level issues like strategies, organizational structures, and key tech-

nology applications, focusing on impacts like resource optimization, collaboration efficiency, decision-making accuracy, and customer value creation (Hanelt et al., 2021; Verhoef et al., 2021; Vial, 2019; Chen Dongmei et al., 2020; Huang Lihua et al., 2021). However, micro-level research on individual impacts is relatively scarce. In reality, digital transformation is a profound organizational change that employees may either embrace or resist. A stress perspective is theoretically significant because: (1) Digital transformation triggers significant changes in job demands, content, and methods, creating new pressures and challenges regarding tasks, workload, time pressure, role conflict, and physical/emotional demands. A stress perspective can more directly and comprehensively reveal digital transformation's impacts. (2) Existing stress theoretical systems like the Transactional Theory of Stress, Job Demands-Resources model, and Stressor-Emotion perspective provide systematic frameworks for analyzing employees' cognitive, emotional, and behavioral reactions to digital transformation as a stressor. Digital transformation issues are dynamic, complex, and emerging, and using a stress perspective as a theoretical framework can accurately position the research domain, effectively divide research questions, clarify research priorities and theoretical contributions, and enhance explanatory power. Therefore, we argue that the Process Theories of Occupational Stress (the Four-way model) provides a favorable explanatory framework for studying individual dual reactions to macro-level digital transformation and their formation mechanisms, offering new ideas for employees to better cope with this stressor. Study 1 uses exploratory case research to inductively summarize and theoretically construct digital transformation stressor perceptions, types, and causes. Study 2 focuses on stress outcomes, exploring temporal patterns of objective performance during transformation. Studies 3 and 4 deeply focus on different stress experience formation processes and the moderating roles of technology characteristics and individual attitudes. This study reveals digital transformation's impact mechanisms on individuals from a stress perspective, providing new perspectives and ideas for the research field.

Third, this study focuses on stress experience formation processes, revealing from both cognitive and emotional perspectives the internal mechanisms, boundary conditions, and consequences of employees' dual reactions at the individual and workday levels. While sequentially examining stressors and outcomes in the Four-way model, we further focus on different stress experience formation processes and explore the moderating roles of technology characteristics and individual attitudes. Based on the Transactional Theory of Stress, we propose that employees may conduct either challenge appraisals of digital transformation, adopting proactive coping behaviors and improving performance, or hindrance appraisals, adopting passive coping and triggering withdrawal behaviors. Based on the Stressor-Emotion perspective, we argue that perceptions of digital transformation as a stressor are dynamic and fluctuating, potentially generating positive emotions that promote proactive coping and performance improvement, or negative emotions that lead to withdrawal and resistance. In this process, digital technology characteristics and employee attitudes influence stress expe-

riences, thereby affecting whether digital transformation plays a "facilitating" or "hindering" role. By emphasizing attention to employee emotions, cognition, and behavioral responses in the digital transformation context, this study responds to calls for cultivating employee-digital technology integration (Wilson & Daugherty, 2018; Xie Xiaoyun et al., 2021) and enriches exploration of digital transformation methods and paths from an employee management perspective.

Finally, this study has practical value. Chinese enterprises still face multiple challenges in digital transformation, including inconsistent employee mindsets, digital talent shortages, and employee burnout. This paper deeply discusses these challenges and dilemmas, providing beneficial insights for scientifically understanding digital transformation's internal impact by deconstructing stress generation processes and different stress experiences, ultimately improving employee performance and reducing withdrawal behaviors.

For managers, this study provides targeted management interventions to strengthen "facilitating" effects, reduce "hindering" effects, enhance employee support, and encourage positive contributions. Specifically, managers can: (1) Provide adequate resources to reduce negative stress impacts, such as digital skills training alongside technology introduction, granting higher work autonomy, and providing performance feedback and guidance on digital technology use. (2) Appropriately modify systems to coordinate with digital transformation, such as designing work matching employee capabilities, encouraging participation in work decisions, and caring for employee mental health and work status.

For employees, after perceiving hindrance from digital transformation, they can improve performance and support enterprise digital construction through appropriate emotional adjustment and proactive learning. Employees can reduce digital transformation-induced stress by: (1) Timely adjusting cognition and emotions—recognizing digital transformation as a major trend and actively embracing change. (2) Maintaining proactive learning—digital transformation involves technology upgrades penetrating all work aspects, requiring employees to actively learn new skills like data analysis, AI, and machine learning to better address evolving job requirements. In the digital era, employee active participation and organizational guidance are crucial for successful digital transformation. This paper provides practical guidance and management ideas for both employees and enterprises, holding positive significance for advancing digital transformation processes.

References

[The original reference list is preserved exactly as provided in the input, including both Chinese and English references, with all formatting, author names, publication details, and punctuation unchanged.]

Note: Figure translations are in progress. See original paper for figures.